PHP106
EXPLORING THE VARIABILITY BETWEEN DISEASE TYPE AND THE PROPORTION OF SUBMISSIONS WITH ICERS HIGHER THAN THE THRESHOLD THAT ARE ACCEPTED BY HTA AGENCIES
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OBJECTIVES: Health technology assessment (HTA) agencies use an incremental cost-effectiveness ratio (ICER) threshold, generally understood to be £30,000 for NICE (England), £30,000 for the SMC (Scotland), CAN$50,000 for CADTH (Canada), and AUS$42,000 for PBAC (Australia). To inform future submissions, we explored the proportion of accepted submissions by disease area and examined any variability in the proportion of submissions that were accepted despite the reported ICERs being higher than these thresholds. **METHODS:** All HTA appraisals from January 2000 to January 2014 from NICE, SMC, CADTH, and PBAC were included in the analysis. Multiple technology appraisals, vaccination programmes, requests for advice, and submissions for which an ICER could not be determined were excluded from analysis. Appraisals were categorized by BNF disease type and the full responses were reviewed; the submitted ICER, recommendation, and reasoning behind the recommendation were extracted. **RESULTS:** Across all four agencies, 679 submissions met the inclusion criteria and 218 submissions included a higher than threshold ICER, with 62 (28%) of these accepted. The proportion of submissions with ICERs above the threshold that were accepted varied by disease type, ranging from 0% (Cardiovascular System) to 50% (Skin). This variability was largely due to the low number of submissions with ICERs above the threshold in 14/15 disease type categories. The remaining disease type (Malignant Disease and Immunosuppression) accounted for the majority (59%) of all submissions with ICERs higher than the threshold; 36/128 (28%) of these were accepted. Key decision drivers for acceptance included unmet clinical need, and condition of participation in a patient access or risk sharing scheme. **CONCLUSIONS:** A considerable proportion of submissions were accepted despite ICERs above the threshold, but this proportion varied widely between disease types. The majority of disease types had few submissions reporting ICERs above the threshold, with the exception of Malignant Disease and Immunosuppression.

PHP107
EXPLORING THE VARIABILITY BETWEEN DISEASE TYPE AND THE PROPORTION OF SUBMISSIONS WITH ICERS LOWER THAN THE THRESHOLD THAT ARE REJECTED BY HTA AGENCIES
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OBJECTIVES: Health technology assessment (HTA) agencies use an incremental cost-effectiveness ratio (ICER) threshold, generally understood to be £30,000 for NICE (England), £30,000 for the SMC (Scotland), CAN$50,000 for CADTH (Canada), and AUS$42,000 for PBAC (Australia). To inform future submissions, we explored the proportion of rejected submissions by disease area and examined any variability in the proportion of submissions that were rejected despite the reported ICERs being lower than these thresholds **METHODS:** All HTA appraisals from January 2000 to January 2014 from NICE, SMC, CADTH, and PBAC were included in the analysis. Multiple technology appraisals, vaccination programmes, requests for advice, and submissions for which an ICER could not be determined were excluded from analysis. Appraisals were categorized by BNF disease type and the full responses were reviewed, with the submitted ICER, recommendation, and reasoning behind the recommendation extracted. **RESULTS:** Across all four agencies, 679 submissions met the inclusion criteria and 405 submissions included a lower than threshold ICER, with 126 (31%) of these submissions rejected. The proportion of submissions rejected despite ICERs below the threshold varied by disease type. Disease types where a high proportion (≥50%) of submissions were rejected despite ICERs below the threshold included 'Respiratory System' (55% rejected), 'Central Nervous System' (55%), and 'Nutrition and Blood' (55%). Disease areas with a low proportion (≤20%) of rejected submissions were 'Infections' (19%) and 'Eye' (20%). Key decision drivers for rejection these disease types were due to high levels of uncertainty regarding clinical-effectiveness, and subsequent cost-effectiveness. **CONCLUSIONS:** The proportion of submissions that were rejected varied dramatically by disease type. In some disease types over half of submissions with an ICER below the threshold were not recommended largely due to non-robust economic analyses, which may indicate inherent underlying difficulties in these disease types in submitting a conclusive data package.

PHP108
CONSISTENCY IN REIMBURSEMENT DECISIONS AT CANADIAN HTA AGENCIES: INESSS VERSUS CDR
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OBJECTIVES: To compare the positive recommendation rate and agreement between CDR and INESSS. **METHODS:** In Canada, eligible non-cancer prescription drugs approved by Health Canada are reviewed by 2 health technology assessment (HTA) agencies: the Common Drug Review (CDR) and the Institute national d'excellence en santé et en services sociaux (INESSS). CDR is part of the Canadian Agency for Drugs and Technologies in Health (CADTH), which makes reimbursement recommendations that are considered by provincial and federal plans, with the exception of Quebec, in making their formulary coverage decisions. In Quebec INESSS performs HTA and issues recommendations to the Regie d'assurance maladie Quebec (RAMQ). Prior to INESSS, HTA in Quebec was performed by the Conseil du Médicaments (CdM). Using our proprietary CDR Tracker®database we examined the recommendations by both agencies and compared recommendation positivity and congruence for all drugs which have been reviewed by CDR, up to December 31, 2013. We separately considered positive and negative recommendations by both agencies. **RESULTS:** The overall positivity rate for CDR recommendations in this period was 52%, compared to 66.9% for INESSS. Of the 275 recommendations issued by CDR, 143 were negative and INESSS agreed with CDR in 90% of these recommendations. 132 of CDR's recommendations were negative, of which INESSS agreed in 48% of cases. **CONCLUSIONS:** INESSS has a higher positive recommendation rate and, possibly due to the broader scope for funding recommendations, frequently disagrees with CDR's analysis, particularly when CDR's recommendation is negative.

PHP109
INTERNATIONAL HTA REFERENCING – A REALITY?
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OBJECTIVES: Countries already have a long history of referencing each other on drug prices through International price Referencing. However it is still unclear whether a similar kind of referencing exists for overall market access decisions. The objective of this report is 3 fold: first to identify if decision referencing exists between these countries and if yes how. Secondly to understand the extent of influence one country might have over another, and thirdly whether this process is formal or informal. **METHODS:** The research was conducted through in-depth secondary research and interviews with stakeholders in 14 countries including the UK, Ireland, Germany, France, Spain, Portugal, Italy, Sweden, Canada, Australia, The Netherlands, Austria, Hungary and Poland **RESULTS:** NICE (UK), SMC (Scotland), and AWMSG (Wales) represent the more sophisticated attempts to integrate HTA into the decision-making process and are currently the most influential HTAs in the world with over 60 countries referencing them worldwide. IQWiG (Germany), HAS (France), TLV (Sweden), and HSE (Ireland) form the medium influence HTA agencies. This can be attributed to the fact that these agencies have their own unique approach to HTA. These agencies consider clinical effectiveness and comparator studies over cost effectiveness models. Poland, Spain, Italy, Austria, Hungary, and Portugal form the low influence HTA agencies that capitalize on the lessons learned from more established international HTA systems due to lack of in-house qualified personnel and resources for HTA activities. **CONCLUSIONS:** The research indicated that there is definitely a cross-influence influence of market access decisions between countries across geographies. Decisions are referenced informally, via direct contact with other HTA agencies, through international networking platforms like EUnetHTA, and INAHTA, or accessing published assessment reports. Variance in the level of influence can be attributed to the age and maturity of the HTA, and longevity of assessment performed (specifically cost-effectiveness assessment).

PHP110
PHARMACOECONOMIC EDUCATION IN BRAZILIAN SCHOOLS OF PHARMACY
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OBJECTIVES: The Pharmacoeconomics allows economic evaluation of products and services for health and helps a lot the health care decision-making. Therefore, there is a need for training of human resources with solid knowledge in pharmacoeconomics in Brazil. However, little is known to what extent Pharmacoeconomics is taught in schools of pharmacy in Brazil. The objective of this study was to survey the pharmacy schools in Brazil to determine the extent of education in pharmacoeconomics offered during the school year 2012-2013. **METHODS:** A questionnaire based on previous studies [Rascati (1998, 2005, 2013) was developed. This was emailed to 55 pharmacy schools in Brazil during October and December 2013. The schools were selected from the Ministry of Education website. University schools of public and private (only those that have high concepts in the National Examination Performance of Students) were included. In addition, a search was made in the database directories of research groups from National Council for Scientific and Technological Development (CNPq). **RESULTS:** Results of the questionnaires sent 55, 14 went unanswered. Only one school does not address the teaching of Pharmacoeconomics in no time. Most discuss some concepts within various disciplines (see 8:0). Four schools have formal disciplines that teach only Pharmacoeconomics or health technology assessment (more than 30 hours). All agree that the education of pharmacoeconomics is important. In the search for directories of research groups were found 23 groups that develop research in the area of Pharmacoeconomics in Brazil. **CONCLUSIONS:** Pharmacoeconomics education in Brazil is still in its infancy and there is a unique opportunity for well-trained instructors and researchers to fill this gap. Provide an education in Pharmacoeconomics to pharmacy and economists students is especially important in the context of evidence-based decisions and when health issues and allocation of scarce resources is a priority for Brazilian Health System.

PHP111
AN ANALYSIS OF REAL WORLD DATA TRENDS IN GLOBAL HTA MARKETS
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OBJECTIVES: The nature and frequency of global stakeholder real world data (RWD) "ask" is growing and there is an impact of not having RW evidence upon market entry such as delayed approval, suboptimal reimbursement and unfavorable re-evaluation. We aimed to assess RWD use for market access (MA) decisions in key global markets. **METHODS:** Search of the HTAWatch database supplemented by an online search of MA stakeholders in the US, UK, Australia, and Canada for use of RWD to support of initial assessment, re-evaluation or coverage and reimbursement recommendations. Use of RWD included safety, effectiveness, economic or quality of life studies. We also assessed theevidence level required from registry to provider or patient survey data. **RESULTS:** In the UK, the National Health Service uses real-world adherence studies to update national treatment guidelines and inform reimbursement. In Australia, the Pharmaceutical Benefits Advisory Committee is willing to delay or make temporary decisions in anticipation of RWD on a product's clinical effectiveness or economic value message. The

Canadian Agency for Drugs and Technologies in Health is funding initiatives such as the Canadian Platform To increase Usage of Real-world Evidence (CAPTURE) project in which physicians collaborate on gathering RWD to inform and improve standard health care practices. Finally, some US hospitals are leveraging the RWD they generate to optimize clinical and economic outcomes for their populations. Additionally, US payers are funding comparative effectiveness studies in crowded markets with costly assets and generic competition. **CONCLUSIONS:** There is a need to monitor HTA agencies' use of RWD to optimize access of the right treatments to the right patients. There is also a need to approach evidence generation in a systematic manner to differentiate assets beyond approval and initial P&R as well as to generate evidence only for those gaps that will impact health care decisions.

PHP112

EVIDENCE-BASED PRACTICE RECOMMENDATIONS: HEALTH QUALITY ONTARIO'S APPROACH

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OBJECTIVES: As part of the Ontario Government's health system funding reform initiative, the Evidence Development and Standards division at Health Quality Ontario (HQO) was tasked with developing episodes of care consisting of evidence-based, best practice recommendations. The HQO clinical handbooks span both medical and surgical conditions, in acute care and community based settings, and include between 25 and 100 recommendations each. The objective is to describe HQO's methodology for developing evidence-based recommended best practices for episodes of care within the rapid timelines of the government mandated funding reform. **METHODS:** Over a 1-year period, the method for deriving evidence-based recommended practices was systematically and iteratively developed by HQO clinical epidemiologists in collaboration with methodologists, clinical experts and stakeholders. **RESULTS:** The resulting approach for applying evidence to best practice recommendations included consideration of various evidence sources and consensus from expert panels which were formed for each of the clinical topics. Preference was given to existing Ontario Health Technology Assessment Committee (OHTAC) recommendations as these are developed using a decision-making framework that considers the clinical benefit offered by a health intervention, in addition to value for money; societal and ethical considerations; and economic and organizational feasibility. Where OHTAC recommendations did not exist, international guidelines were reviewed and selected based on their contextual relevance and assessment of their rigor of development using the AGREE II instrument. Uncertainty or conflict between the guidelines, or by the expert panel members, was addressed with systematic evaluations of the literature through rapid reviews and evidence-based analyses. **CONCLUSIONS:** While continually evolving to balance thoroughness and timeliness of evidence, HQO has developed a method of deriving episode of care recommended best practices set on an evidentiary base within a time-constrained government mandate.

HEALTH CARE USE & POLICY STUDIES – Patient Registries & Post-Marketing Studies

PHP113

PERCEIVED BENEFITS AND BARRIERS OF PAYER-MANUFACTURER POST-MARKETING OUTCOMES STUDY COLLABORATIONS

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OBJECTIVES: To assess the currently perceived benefits and barriers of post-marketing payer-manufacturer outcomes study collaborations by US payers and pharmaceutical manufacturers. **METHODS:** Regional and national US payers and pharmaceutical manufacturers with experience in collaborative post-marketing outcomes study endeavors were invited to participate in an hour-long telephone survey. The survey consisted of questions regarding their perceptions on the benefits and barriers of potential post-marketing outcomes study collaborations, as well as attributes of potential collaborators, studies, products or diseases that would be most highly valued. Descriptive statistics were used to characterize the survey responses. **RESULTS:** A total of 12 payers and four pharmaceutical manufacturer representatives participated in the survey. Payers most often mentioned that the greatest benefit to partnering with manufacturers was the value manufacturers bring in terms of expertise and resources (58%). Benefits manufacturers identified included demonstrating consistency in outcomes data relative to randomized clinical trial data and effectiveness in real-world populations. The two most commonly cited barriers by payers regarding participation in these post-marketing outcomes research collaborations included misaligned incentives (58%) and resource intensiveness (58%). The manufacturers felt that payers are generally wary of these types of collaborations due to possible perceptions of influence, and noted that payers are usually only willing to engage and focus on high-budget impact projects and collaborations. Payers' most important consideration when selecting a pharmaceutical partner for outcomes studies was the willingness of the manufacturer to compromise and align on objectives (42%). Manufacturers agreed that alignment on objectives and expectations is critical for a successful partnership. **CONCLUSIONS:** As competition in the pharmaceutical marketplace increases and recent US health care reform moves forward, payer-manufacturer post-marketing outcomes research collaborations will be increasingly critical as a demonstration of value to all stakeholders.

PHP114

ARE PROMOTIONAL STRATEGIES OF LIFESTYLE DRUGS DIFFERENT FROM NON-LIFESTYLE DRUGS? A CONTENT ANALYSIS OF DTC PRINT MEDIA

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OBJECTIVES: The objective of this study was to compare the promotional strategies of life style drugs (LSD) with non-lifestyle drugs (NLSD) by content analyzing print advertisements. **METHODS:** 142 print advertisements were analyzed to see how LSD and NLSD ad messages differed with respect to rational appeals, emotional appeals and readability. Mann-Whitney U test was performed to compare the two groups of drug advertisements with respect to the type of promotional claims. Descriptive statistics were computed to summarize data pertaining to different ad features. The dataset was composed of 64 LSD advertisements and 78 NLSD advertisements. Inter- rater reliability was measured by Cohen's Kappa for two raters and was found to be adequate for all the variables used in the instrument. **RESULTS:** Significant differences were observed between LSD and NLSD ads with respect to both emotional appeals (p= 0.000) and rational appeals (p=0.000) based on Mann-Whitney U test. LSD ads focused more on emotional appeals while NLSD ads were heavy on rational content. A logistic regression analysis revealed likelihood estimates for ad claims appearing in the two groups. Readability calculated by Gunning-Fog Index for LSD's was 8.84 and for NLSD's was 11.56. Flesch-Kincaid grade level for LSD and NLSD was found to be 7.65 and 10.73, respectively, indicating increased complexity of language in NLSD ads, which was mostly reflecting of the greater use of technical scientific language. **CONCLUSIONS:** The two groups of ads clearly differed with respect to type of content, presentation, structure and complexity as well as promotional strategies adopted. Rational appeals were more predictive of NLSD ad type while emotional appeals were predominant in LSD ads.

PHP115

OPPORTUNITIES FOR THE FUTURE OF UNITED STATES MEDICAL DEVICE SURVEILLANCE: AN ANALYSIS OF THE JOINT REPLACEMENT REGISTRY (JRR) LANDSCAPE IN THE UNITED STATES

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OBJECTIVES: Annually, over 1 million people in the U.S. undergo hip or knee replacements. Registries provide one mechanism to understand the benefits and risks of joint replacement in specific populations or care settings. Although countries such as Australia and Sweden have successfully established centralized JRRs, the U.S. has not. Avalere analyzed the diverse landscape of U.S. JRRs to determine the feasibility of creating one coordinated, national JRR for post-market surveillance. **METHODS:** Avalere identified JRRs in the U.S. through the International Consortium of Orthopaedic Registries participants' list, PubMed searches, abstract reviews, and web searches. Using publicly available sources, characteristics of each registry were recorded in a table. Avalere assessed this data to better understand the feasibility of harmonizing these registry efforts. **RESULTS:** In total, 25 JRRs were identified: 3 national, 4 state, and 18 local. Established between 1967 and 2011, the registries spanned 14 states with objectives including post-market surveillance, outcome improvement, research, provider feedback, and value-based purchasing. Of the 20 registries with enrollment information, 15 enrolled 1-10 hospitals, 4 enrolled 11-50 hospitals, and 1 enrolled more than 200 hospitals. One registry collected only Level I data; 2 collect Levels I-II; 9 collect Levels I-III; and 2 collect Levels I-IV; 11 registries did not have data level collection information. Registry funding sources were self-funded (n=7), publicly funded (n=1), private payer (n=1), and a combination (n=2). **CONCLUSIONS:** U.S. registries typically are established to serve the needs of their operating organization, which influences factors such as the registry's mission, recruitment efforts, and data level collected. While the number of JRRs reflects stakeholders' recognition of their value, the disparate (and sometimes competing) nature of efforts may pose challenges to the creation of a national JRR that can coordinate existing registries, ensure high quality data collection, and facilitate early surveillance to support federal regulatory needs.

HEALTH CARE USE & POLICY STUDIES – Prescribing Behavior & Treatment Guidelines

PHP116

USE OF GLASGOW ANTIMICROBIAL AUDIT TOOL (GAAT) TO ASSESS ANTIMICROBIAL USE IN THE ICUS OF AN INDIAN PUBLIC TEACHING HOSPITAL

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OBJECTIVES: Continuous, indiscriminate and excessive use of antimicrobial agents leads to emergence of antimicrobial-resistant organisms. Antimicrobial resistance substantially raises health care costs and influences patient outcomes (morbidity & mortality). There is a dearth of data available on appropriateness of parenteral antimicrobial therapy in the ICUs, especially in Indian settings. This study involves applying the GAAT criteria to assess the antimicrobial use. **METHODS:** This prospective observational study was carried out in the intensive care units of a public teaching hospital over a period of 12 weeks. All the relevant data was recorded in a pre-designed standardized performa and analyzed. The patients were followed for first 7 days of ICU stay and the changes made in the treatment regimen were carefully evaluated. Parenteral antimicrobial therapy was assessed for appropriateness using GAAT. Intravenous antimicrobial therapy was considered appropriate if two or more of the GAAT criteria were met. **RESULTS:** 85 ICU patients' records were screened during the study period. Out of total 85 patients, 44 patients were male while remaining 41 were females. Of these, 74 patient records were found to have complete data for studying GAAT criteria. The parenteral antimicrobial therapy was found to be appropriate in 61 patients (82%), as per GAAT criteria. **CONCLUSIONS:** Parenteral antimicrobial therapy, as per GAAT, in this study was appropriate in 82% of the patients. This is a preliminary study, future large scale studies should be carried out over a longer period of time to draw any logical conclusion.